



## THE CITY OF SAN DIEGO **MANAGER'S REPORT**

DATE ISSUED: January 7, 2004 REPORT NO. 04-003

ATTENTION: Honorable Mayor and City Council  
Docket of January 13, 2004

SUBJECT: San Diego Sustainable Community Program

REFERENCE: CMR 02-233

### SUMMARY

Issue - Should the City Manager accept San Diego's Cities for Climate Protection Action Plan which includes recommendations provided by the *Ad Hoc* Advisory Committee commissioned to broaden the scope of Action Plan?

Manager's Recommendation – Accept the recommendations in San Diego's Cities for Climate Protection Action Plan to decrease greenhouse gas emissions from City operations, as presented by the Ad Hoc Advisory Committee and direct City staff to more fully develop those recommendations with cost-benefit analysis.

Other Recommendations – None

Fiscal Impact – It is anticipated that policies and programs implemented by the City of San Diego which support Mayor Murphy's Ten Goals and the objectives of the *San Diego Sustainable Community Program* will result in significant cost avoidance, and also environmental and social benefits through energy and fuel savings, and actions to reduce greenhouse gas emissions.

### BACKGROUND

On October 16, 2002, the Rules, Finance and Intergovernmental Relations Committee approved City Manager Report No. 02-233 "San Diego Sustainable Community Program", and it was subsequently approved by City Council. The Mayor and Council requested that an *Ad Hoc* Advisory Committee be established to provide the Manager with recommendations that would decrease greenhouse gas (GHG) emissions from City operations. Once these recommendations were identified, the San Diego's Cities for

Climate Protection Action Plan would be updated to include them. As stated in the October 16, 2002 City Manager Report:

The City of San Diego has agreed to complete an Action Plan for the Cities for Climate Protection (CCP) Program, as part of the City's partnership with the International Council of Local Environmental Initiatives (ICLEI). A report has been compiled listing those actions occurring within the City organization that results in a reduction of GHG emissions. This report was sent to all City departments for review in August 2002. Comments and additional projects were included in the September revision.

The purpose of the of the *Ad Hoc* Advisory Committee is to review the ESD staff report for completeness, and to broaden the San Diego Cities for Climate Protection Action Plan so that it includes recommendations for the City organization and for the community. This report may include measures for which the Mayor and City Council have no formal authority to control, but which may be possible because of their influence in the community.

The *Ad Hoc* Advisory Committee was comprised of City staff and members of the scientific community to review and further develop the City's Action Plan.

City Manager's *Ad Hoc* Advisory Committee Members

First Name	Last Name	Organization
Scott	Anders	San Diego Regional Energy Office
Dan	Cayan	Scripps Institution of Oceanography
Bill Ryan	Drumheller Bell	International Council for Local Environmental Initiatives
Nancy	Hughes	Community Forest Advisory Board
Alan	Hurt	United States Navy
Mike	Lewis	Regional Transportation Center
Greg	Newhouse	Miramar Community College
Walter	Oechel	San Diego State University
John	Ruggieri	Project Design Consultants
Fred	Speece	Tetra Tech EM, Inc
Irene	Stillings	San Diego Regional Energy Office
Mark	Thiemens	University of California at San Diego

The third-party review of the CCP Action Plan was beneficial as a means to more clearly articulate the quantifiable gains in GHG emission reduction and the continuing need to pursue more options that will reduce these emissions further.

### 1990 BASELINE AND 2010 STATUS QUO PROJECTION

Source	1990 Baseline: percent of total GHG	1990 Tons/Yr GHG	2010 Projection (Status Quo-No Action)	2010 “No Action” Projection Tons/Yr GHG	2010 CCP Target Tons/yr GHG
Energy	38%	5,974,000*	44%	8,703,000	5,078,000
Transportation	42%	6,443,000**	45%	8,841,000	5,477,000
Waste	20%	3,089,000***	11%	2,168,000	2,626,000
*based on SDG&E data for total consumption of electricity and natural gas within the city limits					
**based on SANDAG historical data, with the City having 49% of VMT in the San Diego region					
***includes emissions from waste already in landfills, some closed, which will diminish over time					

### City of San Diego Greenhouse Gas Emissions REDUCTIONS NEEDED FOR 2010 TARGET

Source	2010 “No Action” Tons/year	2010 Emission Target Tons/ Year	Current Average Tons/Year Reduced	Remaining Tons/year Reduction
Energy	8,703,000	5,078,000	14,500	3,451,000
Transportation	8,841,000	5,478,000	6,250	3,289,000
Waste	2,168,000	2,626,000	312,750	Target Achieved

### Summary of Recommendations from *Ad Hoc* Advisory Committee

#### Transportation

- Develop and Adopt *Community Fuel Efficiency Policy*
  1. City Departments will develop and implement a plan to reduce fuel consumption 15% each year (in place of reductions, fuel switching to alternative fuels will be allowed provided there are both emission reductions and economic benefits);
  2. The City will provide incentives for taxi’s and other commercial transport vehicles reaching Super Ultra Low Emission Vehicles (SULEVs), such as providing free meter parking for SULEVs.

#### Energy

- ***Resolution R-2004-227:50-Megawatt Goal of Renewable Energy by 2013 -***  
Track and report compliance with Resolution on a quarterly basis
- Continue to upgrade energy conservation in City buildings and support community outreach efforts to achieve similar goals in the community.

#### Waste

- Continue to use methane as an energy source from inactive and closed landfills

- Consider bolder incentives to expand waste minimization efforts:
  - Develop and adopt a construction and demolition recycling ordinance;
  - Develop and adopt a commercial paper recycling ordinance;
  - Develop and adopt a multiple family recycling ordinance.

### **Urban Heat Island**

- Develop and Adopt *Urban Heat Island Mitigation Policy* - Dark materials used on roofs and roads absorb heat during the day and hold it long after the sun sets. A decrease in vegetation to provide shade and cool the air compounds the heating effect. These are the primary factors that cause the “urban heat island effect”. As a result, surface-level ozone concentrations increase because of the chemical reaction between car exhaust and heat—the more heat, the more ozone is produced. This problem is linked with health risks, and is the reason San Diego is not in compliance with State air pollution requirements. Adopting the Mayor’s goal of planting 5,000 shade trees per year on public property for twenty years would contribute to the mitigation of urban heating; however, more studies are needed to access the specific reductions needed. Additionally, alternative materials are available for roads and roofing, and general land use design improvements could serve to reduce the heating process.

### **Environmentally Preferable Purchasing**

- Develop and Adopt *Environmentally Preferably Purchasing Policy* - In an effort to address the social, environmental, and economic aspects of sustainability, this policy supports a “triple bottom line” approach. Just as financial accounting is an indicator of an organization’s economic performance (i.e., the bottom line), the triple bottom line approach accounts for social and environmental performance, in addition to the economic.

### **CONCLUSION**

The *San Diego Sustainable Community Program* is one of many collaborative efforts that demonstrate a strong resolve to leave the legacy of a city worthy of affection for many generations to come. The recommendations listed above will enhance the ability to advance this commitment in a tangible way, and to measure progress.

Respectfully submitted,

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Elmer L. Heap, Jr.  
Assistant Environmental Services Director

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George I. Loveland  
Senior Deputy City Manager

HAYS/EH/LGP

Attachment: San Diego City for Climate Protection Action Plan (Executive Summary)

CITY OF SAN DIEGO  
*CITIES FOR CLIMATE PROTECTION*  
ACTION PLAN

Executive Summary  
November 2003



## Executive Summary

Investing in actions and institutionalizing policies to reduce greenhouse gas (GHG) emissions have collateral benefits for San Diego: economic vitality; public health and safety; natural resource protection; and infrastructure stability. Just as importantly, the City of San Diego's leadership may catalyze significant reductions of GHG emissions by others in the region. Regardless of national policies on global climate change, each town, city, and region can choose to do what is feasible. The collective impact of these actions can make a substantial difference.

On January 29, 2002, the San Diego City Council unanimously approved the San Diego Sustainable Community Program. Actions identified include:

1. Participation in the Cities for Climate Protection (CCP) program coordinated through the International Council of Local Environmental Initiatives (ICLEI);
2. Establishment of a 15% GHG reduction goal set for 2010, using 1990 as a baseline; and
3. Direction to use the recommendations of a scientific *Ad Hoc* Advisory Committee as a means to improve the GHG Emission Reduction Action Plan within the City organization and to identify additional community actions.

This report includes many of the recommendations provided by the *Ad Hoc* Advisory Committee and City staff. By implementing these recommendations the City could directly address the following challenges:

- Mitigation for State and Federal Ozone Standards non-attainment, with associated health benefits ; and
- Enhanced economic prosperity, specifically related to the tourism and agricultural sectors.

**Table 1. San Diego Citywide Greenhouse Gas Emissions  
OVERVIEW**

<b>Milestone</b>	<b>Total Tons of CO<sub>2</sub> Citywide- PER YEAR</b>
1990 Baseline	15,507,000
2010 Status Quo Projection (no action)	19,730,000
2010 CCP Projection (goal)	13,181,000
Difference Between Status Quo and Target	6,549,000

The following series of tables lay out three important contentions:

1. The GHG projection in 2010 resulting from no action taken to curb emissions;
2. The resulting GHG emission reductions due to City of San Diego actions implemented between 1990 and 2002; and

3. Analysis of emission reduction targets to achieve the 15% goal.

**Table 2. City of San Diego Greenhouse Gas Emissions:  
1990 BASELINE AND 2010 STATUS QUO PROJECTION**

<b>Source</b>	<b>1990 Baseline: percent of total GHG</b>	<b>1990 Tons/Yr GHG</b>	<b>2010 Projection (Status Quo-No Action)</b>	<b>2010 “No Action” Projection Tons/Yr GHG</b>	<b>2010 CCP Target Tons/yr GHG</b>
Energy	38%	5,974,000*	44%	8,703,000	5,078,000
Transportation	42%	6,443,000**	45%	8,841,000	5,477,000
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*based on SDG&E data for total consumption of electricity and natural gas within the city limits **based on SANDAG historical data, with the City having 49% of VMT in the San Diego region ***includes emissions from waste already in landfills, some closed, which will diminish over time					

**Table 3. City of San Diego Greenhouse Gas Emissions  
CITYWIDE REDUCTIONS RESULTING FROM 1990-2002 ACTIONS**

<b>Source</b>	<b>12-year Cumulative Tons Reduced</b>
Energy	174,000
Transportation	75,000
Waste	3,753,000

**Table 4. City of San Diego Greenhouse Gas Emissions  
REDUCTIONS NEEDED FOR 2010 TARGET**

<b>Source</b>	<b>2010 “No Action” Tons/year</b>	<b>2010 Emission Target Tons/ Year</b>	<b>Current Average Tons/Year Reduced</b>	<b>Remaining Tons/year Reduction</b>
Energy	8,703,000	5,078,000	14,500	3,451,000
Transportation	8,841,000	5,478,000	6,250	3,289,000
Waste	2,168,000	2,626,000	312,750	Target Achieved

Based on these three sets of data, the following conclusions can be drawn:

1. Actions taken to capture methane gas from solid waste landfills and sewage treatment plants have resulted in a significant decrease in GHG emissions, resulting in achieving and surpassing the reduction goal for solid waste.
2. Actions taken thus far to incorporate energy efficiency and alternative renewable energy have been impressive, but have reached only 5% of the reduction goal.
3. The transportation sector remains a significant source of GHG emissions and has had the lowest GHG reductions, reaching only 2.2% of the goal for 2010.

The City of San Diego can do more as an organization through policies and practices to reduce the volume of GHG emission. However, if the largest one-hundred companies in San Diego put forward the same level of commitment, actively working to reduce the GHG emissions associated with their energy, water and transportation operations, we would be much closer to reaching the 2010 target for the community. With that in mind, the contribution of every individual in the community to reduce energy and vehicle use is the final factor that translates the 15% goal into a reality.

## Summary of Recommendations

### **Transportation**

- Develop and Adopt *Community Fuel Efficiency Policy*
  1. City Departments will develop and implement a plan to reduce fuel consumption 15% each year (in place of reductions, fuel switching to alternative fuels will be allowed provided there are both emission reductions and economic benefits);
  2. The City will provide incentives for taxi's and other commercial transport vehicles reaching Super Ultra Low Emission Vehicles (SULEVs), such as providing free meter parking for SULEVs.
- Annually Review and Revise Existing Policies
  - 200-17 - Alternative Fuels
  - 500-02 - Taxicabs Permits
- State of California Incentives and Regulations
  1. The State of California will grant access to High Occupancy Vehicle (HOV) lanes to single-occupancy SULEVs beginning in 2004.
  2. *SB 552, Clean and Fuel-Efficient State Fleet* – Signed by the Governor October 2003, this bill requires state vehicle fleet to purchase and use more fuel-efficient vehicles, and also requires state offices and agencies that have so called dual-fuel vehicles (that can use either gasoline or a cleaner alternative fuel) to actually use, to the maximum practicable extent, the cleaner alternative fuel in their vehicle.

### **Energy**

- *Resolution R-2004-227:50-Megawatt Goal of Renewable Energy by 2013* - Track and report compliance with Resolution on a quarterly basis.
- Continue to upgrade energy conservation in City buildings and support community outreach efforts to achieve similar goals in the community.
- Annually Review and Revise Existing Policies
  - 400-02 - Biosolids Beneficial Use
  - 400-11- Action Plan for Implementation of Water Conservation Techniques
  - 900-02 - Energy Conservation and Management
  - 900-14 - Sustainable Building
  - 900-18 - Purchase of Energy Efficient Products
- State Incentives and Regulations



1. *CALIFORNIA CODES, PUBLIC UTILITIES CODE SECTION 399.11-399.15* - In order to attain a target of **20 percent renewable energy** for the State of California and for the purposes of increasing the diversity, reliability, public health and environmental benefits of the energy mix, it is the intent of the Legislature that the California Public Utilities Commission and the State Energy Resources Conservation and Development Commission implement the California Renewable Portfolio Standard Program.
2. *SB 684 Alpert: San Diego Regional Energy Authority (pending)* - This bill would state the intent of the Legislature to create a San Diego Regional Energy Authority.

## **Waste**

- Continue to use methane as an energy source from inactive and closed landfills
- Consider bolder incentives to expand waste minimization efforts:
  - Develop and adopt a construction and demolition recycling ordinance;
  - Develop and adopt a commercial paper recycling ordinance;
  - Develop and adopt a multiple family recycling ordinance.
- Annually Review and Revise Existing Policies
  - 100-14 - Procurement Policy: Recycled Products
  - 900-06 - Solid Waste Recycling

## **Urban Heat Island**

- Develop and Adopt *Urban Heat Island Mitigation Policy*  
Dark materials used on roofs and roads absorb heat during the day and hold it long after the sun sets. A decrease in vegetation to provide shade and cool the air compounds the heating effect. These are the primary factors that cause the “urban heat island effect”. As a result, surface-level ozone concentrations increase because of the chemical reaction between car exhaust and heat - the more heat, the more ozone is produced. This problem is linked with health risks, and is the reason San Diego is not in compliance with State air pollution requirements. Adopting the Mayor’s goal of planting 5,000 shade trees per year on public property for twenty years would contribute to the mitigation of urban heating; however, more studies are needed to access the specific reductions needed. Additionally, alternative materials are available for roads and roofing, and general land use design improvements could serve to reduce the heating process.
- Annually Review and Revise Existing Policies
  - 200-05 - Planting of Trees on City Streets
  - 200-09 - Street Tree Plan-Central Business District
  - 400-12 - Implementation of Water Reclamation/Reuse

600-23 - Open Space Preservation and Maintenance  
600-39 - Land Guidance

### **Environmentally Preferable Purchasing**

- Develop and Adopt *Environmentally Preferably Purchasing Policy*

In an effort to address the social, environmental, and economic aspects of sustainability, this policy supports a “triple bottom line” approach. Just as financial accounting is an indicator of an organization’s economic performance (i.e., the bottom line), the triple bottom line approach accounts for social and environmental performance, in addition to the economic. The broad goals of the triple bottom line include “a clean and productive environment which provides renewable resources and essential life support services; societies which allow everyone access to a good quality of life; and a vibrant economy which works with nature and society” (Centre for Human Ecology 1998).

- Annually Review and Revise Existing Policies

100-13 - Procurement Limitations Adjustments Based on the Consumer Price Index

100-14- Procurement Policy: Recycled Products

900-14- Sustainable Building

900-18- Purchase of Energy Efficient Products